

Title (en)

IMAGING DEVICE, METHOD FOR MANUFACTURING IMAGING DEVICE, AND ELECTRONIC APPARATUS

Title (de)

BILDGEBUNGSVORRICHTUNG, VERFAHREN ZUR HERSTELLUNG DER BILDGEBUNGSVORRICHTUNG UND ELEKTRONISCHE VORRICHTUNG

Title (fr)

DISPOSITIF D'IMAGERIE, SON PROCÉDÉ DE FABRICATION ET APPAREIL ÉLECTRONIQUE

Publication

EP 4243055 A4 20240110 (EN)

Application

EP 21888980 A 20211011

Priority

- JP 2020186610 A 20201109
- JP 2021131322 A 20210811
- JP 2021037502 W 20211011

Abstract (en)

[origin: EP4243055A1] Provided is an imaging device (1) including: a first semiconductor substrate (100) provided with a photoelectric conversion element, a second semiconductor substrate (200) stacked on the first semiconductor substrate with an interlayer insulating film (123) interposed therebetween and provided with a pixel circuit that reads out charges generated in the photoelectric conversion element as a pixel signal, and a via (600) that penetrates the interlayer insulating film and electrically connects a first surface of the first semiconductor substrate facing the second semiconductor substrate and at least a part of a second surface of the second semiconductor substrate facing the first surface.

IPC 8 full level

H01L 21/3205 (2006.01); **H01L 21/768** (2006.01); **H01L 23/522** (2006.01); **H01L 27/146** (2006.01); **H04N 25/79** (2023.01)

CPC (source: EP KR US)

H01L 21/76849 (2013.01 - EP); **H01L 23/485** (2013.01 - EP); **H01L 23/5226** (2013.01 - KR); **H01L 23/532** (2013.01 - KR); **H01L 23/53271** (2013.01 - EP); **H01L 27/14612** (2013.01 - EP); **H01L 27/1462** (2013.01 - KR); **H01L 27/14634** (2013.01 - EP KR US); **H01L 27/14636** (2013.01 - EP KR US); **H01L 27/14687** (2013.01 - KR); **H01L 27/1469** (2013.01 - US); **H04N 25/70** (2023.01 - KR); **H04N 25/79** (2023.01 - EP); **H01L 21/76865** (2013.01 - EP)

Citation (search report)

- [X] WO 2019150981 A1 20190808 - SONY SEMICONDUCTOR SOLUTIONS CORP [JP]
- [X] WO 2018186197 A1 20181011 - SONY SEMICONDUCTOR SOLUTIONS CORP [JP]
- [X] WO 2020105713 A1 20200528 - SONY SEMICONDUCTOR SOLUTIONS CORP [JP]
- [A] EP 3734660 A1 20201104 - SONY SEMICONDUCTOR SOLUTIONS CORP [JP]
- [A] US 5641991 A 19970624 - SAKOH TAKASHI [JP]
- See references of WO 2022097427A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

EP 4243055 A1 20230913; **EP 4243055 A4 20240110**; CN 116210076 A 20230602; JP WO2022097427 A1 20220512; KR 20230104598 A 20230710; TW 202236425 A 20220916; US 2024006448 A1 20240104; WO 2022097427 A1 20220512

DOCDB simple family (application)

EP 21888980 A 20211011; CN 202180070653 A 20211011; JP 2021037502 W 20211011; JP 2022560687 A 20211011; KR 20237012591 A 20211011; TW 110140825 A 20211102; US 202118251333 A 20211011